LISTING OF CLAIMS:

1-7. (Canceled).

8-15. (Withdrawn from Consideration).

16. (Canceled).

17-34. (Withdrawn from Consideration).

35. (Canceled).

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36. (Currently Amended) A diffractive optical element comprising:

a first optical region made of a first optical material which is substantially transparent to light within a wavelength range to be used and has a refractive index n_1;

a second optical region made of a second optical material which is substantially transparent to said light but is different from said first optical material and has a refractive index n_2;

a third optical region made of a third optical material which is transparent to said light but is different from said second optical material and has a refractive index n_3, said first, second and third optical regions being arranged to be brought into contact with each other or being arranged close to each other;

a first relief pattern formed in a boundary surface between said first and second optical regions and having a first pitch distribution and a first depth; and

a second relief pattern formed in a boundary surface between said second and third optical regions and having a second pitch distribution ~~which is~~ and a second depth, said second pitch distribution being substantially identical with said first pitch distribution of the first relief pattern, wherein

said first and second pitch distributions and first and second depths of the first and second relief patterns are set to diffract said light,

said first and second relief patterns ~~being substantially aligned~~ are arranged such that tops and bottoms of the first relief pattern are aligned with tops and bottoms of the second relief pattern, respectively viewed in a direction of an optical axis, and

said refractive indices n_1, n_2 and n_3 of the first, second and third optical materials satisfy the following condition:

$n_1, n_3 > n_2$. ~~of the diffractive optical element, wherein said first relief pattern has a wavelength dependent phase amplitude $a_1(\lambda)$, said second relief pattern has a wavelength dependent phase amplitude $a_2(\lambda)$, said diffractive element has a phase amplitude $a(\lambda)$ which is a sum of said phase amplitudes $a_1(\lambda)$ and $a_2(\lambda)$ and includes at least one peak value within the wavelength range to be used.~~

37-38. (Withdrawn from Consideration)

39. (Canceled).

40. (Currently Amended) A diffractive optical element comprising:

a first optical region made of a first optical material which is substantially transparent to light within a wavelength range to be used and has a refractive index n_1;

a second optical region made of a second optical material which is substantially transparent to said light but is different from said first optical material and has a refractive index n_2;

a third optical region made of a third optical material which is transparent to said light but is different from said second optical material and has a refractive index n_3, said first, second and third optical regions being arranged to be brought into contact with each other or being arranged close to each other;

a first relief pattern formed in a boundary surface between said first and second optical regions and having a first pitch distribution and a first depth; and

a second relief pattern formed in a boundary surface between said second and third optical regions and having a second pitch distribution ~~which is~~ and a second depth, said second pitch

distribution being substantially identical with said first pitch distribution of the first relief pattern, wherein

said first and second pitch distributions and first and second depths of the first and second relief patterns are set to diffract said light,

said first and second relief patterns ~~being substantially aligned~~ are arranged such that tops and bottoms of the first relief pattern are aligned with tops and bottoms of the second relief pattern viewed in a direction of an optical axis ~~of the diffractive optical element, wherein~~

~~said first relief pattern has a wavelength dependent phase amplitude $a_1(\lambda)$, said second relief pattern has a wavelength dependent phase amplitude $a_2(\lambda)$, said diffractive element has a phase amplitude $a(\lambda)$ which is a sum of said phase amplitudes $a_1(\lambda)$ and $a_2(\lambda)$ and includes at least one peak value within the wavelength range to be used, wherein,~~

said refractive indices n_1, n_2 and n_3 of the first, second and third optical materials satisfy a condition of $n_1, n_3 > n_2$, and

when an average refractive index of a composite relief pattern structure constituted by ~~the~~ said first and second relief patterns is n_0, a thickness of the diffractive element is D_7 and

a smallest pitch of the first and second relief patterns is T, the following condition is satisfied:

$2\pi\lambda D/n_0T^2 < 1$.

41. (Canceled).

42. (Currently Amended) A diffractive optical element comprising:

a first optical region made of a first optical material which is substantially transparent to light within a wavelength range to be used and has a refractive index n_1;

a second optical region made of a second optical material which is substantially transparent to said light but is different from said first optical material and has a refractive index n_2;

a third optical region made of a third optical material which is transparent to said light but is different from said second optical material and has a refractive index n_3, said first, second and third optical regions being arranged to be brought into contact with each other or being arranged close to each other;

a first relief pattern formed in a boundary surface between said first and second optical regions and having a first pitch distribution and a first depth; and

a second relief pattern formed in a boundary surface between said second and third optical regions and having a second pitch

distribution ~~which is~~ and a second depth, said second pitch distribution being substantially identical with said first pitch distribution of the first relief pattern, wherein

said first and second pitch distributions and first and second depths of the first and second relief patterns are set to diffract said light,

said first and second relief patterns ~~being substantially aligned~~ are arranged such that tops and bottoms of the first relief pattern are aligned with tops and bottoms of the second relief pattern, respectively viewed in a direction of an optical axis ~~of the diffractive optical element, wherein~~

~~said first relief pattern has a wavelength dependent phase amplitude $a_1(\lambda)$, said second relief pattern has a wavelength dependent phase amplitude $a_2(\lambda)$, said diffractive element has a phase amplitude $a(\lambda)$ which is a sum of said phase amplitudes $a_1(\lambda)$ and $a_2(\lambda)$ and includes at least one peak value within the wavelength range to be used, wherein,~~

said refractive indices n_1, n_2 and n_3 of the first, second and third optical materials satisfy a condition of $n_1, n_3 > n_2$; and

when a shortest wavelength of the wavelength range to be used is λ_1, a longest wavelength of the wavelength range to be

used is λ_2, and a middle wavelength between λ_1 and λ_2 is $\lambda_0 \equiv (=(\lambda_1 + \lambda_2)/2)$, the following condition is satisfied:

$\lambda_2 - \lambda_1 > 0.05\lambda_0$.

43-48. (Withdrawn from consideration).

49-51. (Canceled herein).

52. (New) A diffractive optical element comprising:

a first optical region made of a first optical material which is substantially transparent to light within a wavelength range to be used and has a refractive index n_1;

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a second optical region made of a second optical material which is substantially transparent to said light but is different from said first optical material and has a refractive index n_2;

a third optical region made of a third optical material which is transparent to said light but is different from said second optical material and has a refractive index n_3, said first, second and third optical regions being arranged to be brought into contact with each other or being arranged close to each other;

a first relief pattern formed in a boundary surface between said first and second optical regions and having a first pitch distribution and a first depth; and

a second relief pattern formed in a boundary surface between said second and third optical regions and having a second pitch

distribution and a second depth, said second pitch distribution being substantially identical with said first pitch distribution of the first relief pattern, wherein

said first and second pitch distributions and first and second depths of the first and second relief patterns are set to diffract said light,

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said first and second relief patterns are arranged such that tops and bottoms of the first relief pattern are aligned with bottoms and tops of the second relief pattern, respectively viewed in a direction of an optical axis, and

said refractive indices n_1, n_2 and n_3 of the first, second and third optical materials satisfy the following condition:

$n_1 < n_2 < n_3$.